



# M200-DI

## Wet/Wet Differential Pressure SMART MANOMETER

Meriam's M200-DI handheld Smart Manometer for liquids brings high accuracy to wet/wet differential pressure applications. Potentially corrosive or wet gasses are also handled by the M200-DI. Wetted parts are 316L SS with Viton O-rings (consult factory for other materials). The M200-DI features NIST traceable accuracy of  $\pm 0.05\%$  FS ( $\pm 0.025\%$  FS optional) independent of temperature effect from 23° to 122 °F for Intrinsically Safe models. The accuracy statement is good from -4 ° to 122 °F for general purpose models.

Pressure ranges are available from 0 – 1 PSID to 0 – 500 PSID. All ranges are rated for 1000 PSI common mode pressure. HI side overpressure rating is 3X F.S. while the LO side overpressure rating is 3X F.S. or 150 PSI, whichever is less. Optional flushing ports (pending) allow solvent clean-out of P1 and P2 ports or can be used to vent air from the connecting tubing of liquid applications.

The display can read in any of 11 pressure units or can be linearly scaled for special user units. A square root flow function allows the M200-DI to display flow in user defined engineer units. The user selectable damping feature minimizes pulsation effects. The Min/Max function captures the extremes of pulsating pressure signals and the Hold function freezes the display for convenient reading if needed. Auto Record documents up to 240 reading for future recall.

### Intrinsically Safe



#### Accuracy

Accuracy:  $\pm 0.05\%$  FS or optional  $\pm 0.025\%$  F.S. No temperature effect over specified operating temperature

#### Certifications

CE (standard)  
Ex ia IIC T4  
Class I, Div.1 Groups A,B,C,D, T4

#### Engineering Units

Inches of H<sub>2</sub>O (select 4° C, 20° C, or 60° F), PSI, mm of Hg, inches of Hg, mBars, Bars, kPa, kg/cm<sup>2</sup>, cm of H<sub>2</sub>O, user selectable scaling, sq. root.

#### Media Compatibility

DI: Isolated differential sensor for fluids compatible with 316L SS and Viton.

#### Pressure Limits

Common mode: 1,000 PSI  
P1 (HI) only: 3X F.S.  
P2 (LO) only: 3X F.S. or 150 PSI, whichever is less

#### Leak Test

Allows users to view Min/Max pressure values and calculates leak rate per minute in pressure units. The feature is very handy when troubleshooting or pressure testing pneumatic systems.

#### Auto Record

Document up to 240 readings (automatically or manually) to reduce paperwork and field time. Saved readings can be recalled at any time.

#### Min/Max Capture

Capture speed is equal to the selected damping rate.

#### Damping Rates

Exponential damping with user selectable time constant from 0.1 to 25 seconds.

#### Field Re-cal

The M200-DI series can be recalibrated in the field for zero, span, and linearity. The user has the option to select a 1 point or 5 point calibration procedure. Enables users with accurate primary standards to calibrate unit locally if desired.

#### Auto Shut-Off

User selectable shut-off. Programmable at 10, 20, 30, 45, 60 minutes.

## Technical Specifications

### Base Unit

30 ounce (6.5" X 3.6" X 2.25") polycarbonate, permanently dissipative, ESD protection.

### Keypad

Sealed membrane type with 5 dome contact style buttons.

### Display

5 significant digit LCD (0.25" high), 2 line x 16 alphanumeric characters with contrast adjustment. Two stage backlight with visual overrange indication.

### Power

4 each AA batteries providing over 100 hours of continuous use.

### Wetted Parts

316L SS, Viton O-rings  
Consult factory for other O-ring materials



### Connections

1/8" female NPT, 316L SS, HI and LO ports  
5/16 - 24 SAE/MS J1926 flushing ports with 316L SS plugs (2 each, optional)

### NIST Traceable Accuracy

± 0.05% F.S. or optional ± 0.025% F.S.  
DI0001 (1 PSID) range available at ± 0.05% F.S. only  
Accuracy statement includes all affects of temperature over the specified operating range

### Temperature Specifications

Storage: -40° F to 140° F (-40° C to 60° C)  
Operating: 23° F to 122° F (-5° C to 50° C) I.S. Models  
-4° F to 122° F (-20° C to 50° C) G.P. Models

### Pressure Ranges

DI0001	0-1 PSID	Differential
DI0005	0-5 PSID	Differential
DI0015	0-15 PSID	Differential
DI0030	0-30 PSID	Differential
DI0100	0-100 PSID	Differential
DI0300	0-300 PSID	Differential
DI0500	0-500 PSID	Differential

### Certifications

CE 0539 Ex II 1 G  
Ex ia IIC T4  
DEMKO 06 ATEX 0615699 IP 40



Class I, Div.1 Groups A,B,C,D, T4  
Intrinsically Safe, Exia  
Class I, Zone 0, AEx ia IIC T4  
Class I, Zone 0, Ex ia IIC T4  
-5 C < Ta < +50 C

## Ordering Information

### All Models Include

- Protective Red Boot
- 4 AA Alkaline batteries
- User's Manual

### Order Options

- Intrinsic Safety Certification
- Flushing ports (pending)
- ± 0.025% of F.S. or ± 0.05% F.S.



## Manifold Options



Standard Manifold



Flushing Manifold

## Optional Accessories

- Z9A000069** Hard Carrying Case
- Z1066-11** M10-KT Hydraulic scissor pump, 0-10,000 PSIG, includes hoses, fittings & carry bag
- Z1089** 3-valve manifold assembly, 316 SS